UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,858	12/29/2000	Joseph M. Geigel	80677DMW	8939

7590 06/16/2005	**EXAMINER**
Thomas H. Close	NGUYEN, NHON D

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ART UNIT	PAPER NUMBER
2179	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/750,858	GEIGEL ET AL.
	Examiner	Art Unit	·
	Nhon (Gary) D Nguyen	2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _21 March 2005_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-36_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-36_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to amendment filed 03/21/2005.

2. Claims 1-36 are pending in this application. Claims 1-8, 12, 14, 17, 18, 22, 24, 27 and 36 are independent claims. In the amendment, no claim is canceled, claims 1-7, 17 and 27 are amended, and claims 33-36 are added. This action is made non-final.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-9 and 12-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koba (US 6,222,947) in view of Guttman et al. ("Guttman", US 6,366,918).

As per independent claim 1, Koba teaches a digital image album layout system comprising:

a page creator module operable to receive a set of images and user preferences and to generate album preference criteria using said user preferences, said page creator module having a first program algorithm operable to execute calculations on a first population of image criteria, said page creator module having a page evaluation module operable to test said first population for fitness to said album preference criteria, said page creator module being operable to distribute

said images to a plurality of album pages responsive to said testing for fitness to said album

preference criteria (col. 6, lines 43-59) and

an image placement module operable to receive the set of images and user preferences

and to generate page preference criteria using said user preferences, said page creator module

having a second program algorithm operable to execute calculations on a second population of

page layout criteria, said image placement module having a layout evaluation module operable to

test said second population for fitness to said page preference criteria, said image placement

module being operable to distribute said images on respective said album pages responsive to

said testing for fitness to said preference criteria (col. 7, lines 37-41).

Koba does not disclose the first program algorithm and the second program algorithm to

implement genetic programming technique. Guttman teaches a genetic algorithm approach to

produce the optimized publication layouts by generating and evaluating a large number of

possible layouts and selects the optimum layout (col. 3, lines 1-9). It would have been obvious to

an artisan at the time of the invention to use the teaching from Guttman of applying genetic

programming in Koba's system since the advantages of the Genetic Programming approach

include its robustness to changing environment, its low demand for data, and its computational

speed.

As per independent claim 2, Koba teaches an automated album layout method responsive

to a set of inputs containing digital images, graphics, and other 2-dimensional objects,

comprising the steps of:

evaluating a grouping of the image objects for distribution into a number of album pages

using a genetic algorithm, according to parameters of a fitness function (col. 6, lines 43-59);

assigning each image object to a page based on user preferences, including balance (col.

6, line 52 – col. 7, line 13);

displaying said page for user viewing, and refining the distribution based on further user

action (S210 of fig. 4 and fig. 5C and 5G).

Koba does not disclose the program algorithm to implement genetic programming

technique. Guttman teaches a genetic algorithm approach to produce the optimized publication

layouts by generating and evaluating a large number of possible layouts and selects the optimum

layout (col. 3, lines 1-9). It would have been obvious to an artisan at the time of the invention to

use the teaching from Guttman of applying genetic programming in Koba's system since the

advantages of the Genetic Programming approach include its robustness to changing

environment, its low demand for data, and its computational speed.

As per independent claim 3, Koba teaches an automated layout and presentation method

responsive to a set of inputs containing digital images, graphics, and other two-dimensional

objects, comprising the steps of:

evaluating the `x' and `y' position coordinates, scale, and rotation of each of the input

images objects within a page using a genetic algorithm, according to parameters of a fitness

function (col. 7, lines 37-41);

creating a page layout based on user preferences including rotation (col. 7, lines 37-41);

displaying said page layout for user viewing; refining said page layout based on further

user action (S210 of fig. 4 and fig. 5C and 5G), and formatting the page layout printing (col. 8,

lines 12-14).

Koba does not disclose the program algorithm to implement genetic programming

technique. Guttman teaches a genetic algorithm approach to produce the optimized publication

layouts by generating and evaluating a large number of possible layouts and selects the optimum

layout (col. 3, lines 1-9). It would have been obvious to an artisan at the time of the invention to

use the teaching from Guttman of applying genetic programming in Koba's system since the

advantages of the Genetic Programming approach include its robustness to changing

environment, its low demand for data, and its computational speed.

As per independent claims 4, 5, and 6, they are rejected under the same rationale as claim

1.

As per independent claim 7, it is rejected under the same rationale as claim 4.

As per independent claim 8, Koba teaches a method of assigning a plurality of images,

having image parameters, to one or more pages in an album, comprising the steps of:

specifying an initial set of page assignments defining the album page assignment for each

of the plurality of images; initializing a population by assigning said initial set of page

assignments to genes within an album genome structure (col. 6, lines 43-45); evolving said

population in accordance with a program algorithm to produce a present set of page assignments

within said album genome structure (col. 6, lines 45-54);

calculating a present set of page criteria according to said present set of page

assignments, the image parameters, and a set of album page parameters; testing said present set

of page criteria according to an album fitness function to determine an album score; repeating

said evolving and calculating steps if said album score fails to meet an album threshold value,

and outputting image page assignments according to said present page assignment if said album

score meets said album threshold value (col. 6, line 55 – col. 7, line 19).

Koba does not disclose the program algorithm to implement genetic programming

technique. Guttman teaches a genetic algorithm approach to produce the optimized publication

layouts by generating and evaluating a large number of possible layouts and selects the optimum

layout (col. 3, lines 1-9). It would have been obvious to an artisan at the time of the invention to

use the teaching from Guttman of applying genetic programming in Koba's system since the

advantages of the Genetic Programming approach include its robustness to changing

environment, its low demand for data, and its computational speed.

As per claim 9, Koba teaches the image parameters include an image event value, image

chronology value, and image emphasis value (col. 6, lines 7-42).

As per independent claim 12, Koba teaches a method of assigning a plurality of images,

having image parameters, to one or more pages in an album, comprising the steps of:

specifying an initial set of page assignments defining the album page assignment for each

of the plurality of images; initializing a population by assigning said initial set of page

assignments to genes within an album genome structure (col. 6, lines 43-45); evolving said

population in accordance with a program algorithm to produce a present set of page assignments

within said album genome structure (col. 6, lines 45-54);

calculating a present set of page criteria according to said present set of page

assignments, the image parameters, and a set of album page parameters; testing said present set

of page criteria according to an album fitness function to determine an album score; repeating

said evolving and calculating steps if said album score fails to meet an album threshold value,

and outputting image page assignments according to said present page assignment if said album

score meets said album threshold value (col. 6, line 55 – col. 7, line 19);

Koba does not disclose the program algorithm to implement genetic programming

technique includes a genetic mutation function and a genetic crossover function. Guttman

teaches a genetic algorithm approach to produce the optimized publication layouts by generating

and evaluating a large number of possible layouts and selects the optimum layout (col. 3, lines 1-

9). It would have been obvious to an artisan at the time of the invention to use the teaching from

Guttman of applying genetic programming in Koba's system since the advantages of the Genetic

Programming approach include its robustness to changing environment, its low demand for data,

and its computational speed.

As per claim 13, Koba teaches calculation of said page criteria includes calculation of an emphasis value range, a page count value, and a balance threshold value (col. 6, line 55 – col. 7, line 19).

As per independent claim 14, Koba teaches a method of assigning a plurality of images, having image parameters, to one or more pages in an album, comprising the steps of:

specifying an initial set of page assignments defining the album page assignment for each of the plurality of images; initializing a population by assigning said initial set of page assignments to genes within an album genome structure (col. 6, lines 43-45); evolving said population in accordance with a program algorithm to produce a present set of page assignments within said album genome structure (col. 6, lines 45-54);

calculating a present set of page criteria according to said present set of page assignments, the image parameters, and a set of album page parameters; testing said present set of page criteria according to an album fitness function to determine an album score; repeating said evolving and calculating steps if said album score fails to meet an album threshold value, and outputting image page assignments according to said present page assignment if said album score meets said album threshold value (col. 6, line 55 – col. 7, line 19);

wherein said testing step further comprises the steps of: comparing said page criteria to preference criteria and generating a preliminary album score and scaling said preliminary album score in accordance with album importance parameters to produce a final album score (col. 6, line 55 – col. 7, line 19).

Koba does not disclose the program algorithm to implement genetic programming

technique. Guttman teaches a genetic algorithm approach to produce the optimized publication

layouts by generating and evaluating a large number of possible layouts and selects the optimum

layout (col. 3, lines 1-9). It would have been obvious to an artisan at the time of the invention to

use the teaching from Guttman of applying genetic programming in Koba's system since the

advantages of the Genetic Programming approach include its robustness to changing

environment, its low demand for data, and its computational speed.

As per claim 15, Koba teaches the page criteria includes balance, emphasis, chronology,

and unity (col. 6, lines 7-42 and col. 6, line 55 – col. 7, line 19).

As per claim 16, Koba teaches the preference criteria are based upon user preferences

(col. 3, lines 56-61).

As per independent claim 17, it is rejected under the same rationale as claim 1.

As per independent claim 18, Koba teaches a method of arranging one, or more images,

having image parameters, on an album page, comprising the steps of:

specifying an initial set of positioning parameters for each of the one or more images;

initializing a population by assigning said initial set of positioning parameters as genes in a page

genome structure; evolving said population in accordance with a program algorithm to produce a

present set of positioning parameters within said page genome structure (col. 7, lines 20-36);

calculating a set of present layout criteria, according to said present set of positioning

parameters, the image parameters, and a set of page layout parameters; testing said present set of

layout criteria according to a page fitness function to determine a page score; repeating said

evolving and calculating steps if said page score fails to meet a page threshold value (col. 7, lines

37-47); and

outputting a page layout according to said present set of positioning parameters if said

page score meets said page threshold value (col. 8, lines 1-14).

Koba does not disclose the program algorithm to implement genetic programming

technique. Guttman teaches a genetic algorithm approach to produce the optimized publication

layouts by generating and evaluating a large number of possible layouts and selects the optimum

layout (col. 3, lines 1-9). It would have been obvious to an artisan at the time of the invention to

use the teaching from Guttman of applying genetic programming in Koba's system since the

advantages of the Genetic Programming approach include its robustness to changing

environment, its low demand for data, and its computational speed.

As per claim 19, Koba teaches the image parameters include an image emphasis value

(col. 7, lines 20-36).

As per claim 20, Koba teaches the genome structure is an array (the layouts of pictures as

in fig. 5F, for example, are arrays).

As per claim 21, this claim is rejected under the same rationale as claim 20.

As per independent claim 22, Koba teaches a method of arranging one, or more images, having image parameters, on an album page, comprising the steps of:

specifying an initial set of positioning parameters for each of the one or more images;

initializing a population by assigning said initial set of positioning parameters as genes in a page genome structure; evolving said population in accordance with a program algorithm to produce a present set of positioning parameters within said page genome structure (col. 7, lines 20-36);

calculating a set of present layout criteria, according to said present set of positioning parameters, the image parameters, and a set of page layout parameters; testing said present set of layout criteria according to a page fitness function to determine a page score; repeating said evolving and calculating steps if said page score fails to meet a page threshold value (col. 7, lines 37-47); and

outputting a page layout according to said present set of positioning parameters if said page score meets said page threshold value (col. 8, lines 1-14).

Koba does not disclose the program algorithm to implement genetic programming technique includes a genetic mutation function and a genetic crossover function. Guttman teaches a genetic algorithm approach to produce the optimized publication layouts by generating and evaluating a large number of possible layouts and selects the optimum layout (col. 3, lines 1-9). It would have been obvious to an artisan at the time of the invention to use the teaching from Guttman of applying genetic programming in Koba's system since the advantages of the Genetic Programming approach include its robustness to changing environment, its low demand for data, and its computational speed.

As per claim 23, Koba teaches the layout criteria includes calculation of image rotation (col. 6, lines 8-20 and col. 7, lines 37-41).

As per independent claim 24, Koba teaches a method of arranging one, or more images, having image parameters, on an album page, comprising the steps of:

specifying an initial set of positioning parameters for each of the one or more images;

initializing a population by assigning said initial set of positioning parameters as genes in a page genome structure; evolving said population in accordance with a program algorithm to produce a present set of positioning parameters within said page genome structure (col. 7, lines 20-36);

calculating a set of present layout criteria, according to said present set of positioning parameters, the image parameters, and a set of page layout parameters; testing said present set of layout criteria according to a page fitness function to determine a page score; repeating said evolving and calculating steps if said page score fails to meet a page threshold value (col. 7, lines 37-47); and

outputting a page layout according to said present set of positioning parameters if said page score meets said page threshold value (col. 8, lines 1-14).

wherein said testing step further comprises the steps of: comparing said layout criteria to layout preference criteria and generating a preliminary page score and scaling said preliminary page score in accordance with page importance parameters to produce a final page score (col. 8, lines 1-14).

Koba does not disclose the program algorithm to implement genetic programming

technique. Guttman teaches a genetic algorithm approach to produce the optimized publication

layouts by generating and evaluating a large number of possible layouts and selects the optimum

layout (col. 3, lines 1-9). It would have been obvious to an artisan at the time of the invention to

use the teaching from Guttman of applying genetic programming in Koba's system since the

advantages of the Genetic Programming approach include its robustness to changing

environment, its low demand for data, and its computational speed.

As per claim 25, Koba teaches the page criteria include white space range (col. 6, lines 8-

20 and col. 7, lines 37-41).

As per claim 26, Koba teaches the layout preference criteria are based upon user

preferences (col. 3, lines 56-61).

As per independent claim 27, it is rejected under the same rationale as claim 1.

As per claim 28, Koba teaches repeating said evolving and testing steps if said album

score fails to meet said album threshold value (col. 6, line 55 – col. 7, line 19).

As per claim 29, since Koba's program algorithm implements Guttman's genetic

programming technique (Guttman, col. 3, lines 1-9), it is inherent in genetic programming to

have the genetic evolution calculations performed by at least one of the first and second genetic

engines include the application of a genetic mutation function.

As per claim 30, since Koba's program algorithm implements Guttman's genetic

programming technique (Guttman, col. 3, lines 1-9), it is inherent in genetic programming to

have the genetic evolution calculations performed by at least one of the first and second genetic

engines include the application of a genetic crossover function.

As per claim 31, since Koba's program algorithm implements Guttman's genetic

programming technique (Guttman, col. 3, lines 1-9), it is inherent in genetic programming to

have the step of evolving said genetic population includes the application of a genetic mutation

function.

As per claim 32, since Koba's program algorithm implements Guttman's genetic

programming technique (Guttman, col. 3, lines 1-9), it is inherent in genetic programming to

have the step of evolving said genetic population includes the application of a genetic crossover

function.

As per claim 33, Koba teaches generating said album fitness function using user

preferences (col. 6, lines 43-59).

As per claim 34, Koba teaches generating said page fitness function using user preferences (col. 7, lines 37-41).

As per claim 35, Koba teaches generating said album fitness function and said page fitness function using user preferences (col. 6, lines 43-59 and col. 7, lines 37-41).

As per independent claim 36, it is rejected under the same rationale as claim 1.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koba in view of Guttman and further in view of Wang (US 6,014,458).

As per claim 10, Koba in view of Guttman does not disclose the genome structure is a tree structure. Wang discloses hierarchical tree structure for arranging images in document pages in and fig. 8, lines 27-45. It would have been obvious to an artisan at the time of the invention to use the teaching from Wang of the genome structure is a tree structure in modified Koba's system since it would allow a user to easily arrange and organize images in pages.

As per claim 11, it is rejected under the same rationale as claim 10.

Response to Arguments

7. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

Inquiries

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhon (Gary) D Nguyen whose telephone number is (571)272-4139. The examiner can normally be reached on Monday - Friday with every other Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R Herndon can be reached on (571)272-4136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nhon (Gary) Nguyen
June 12, 2005

BA HUYNH
PRIMARY EXAMINER